

# City of Atwater

SEP 15 2006

CIVIC CENTER  
750 BELLEVUE ROAD  
ATWATER, CALIFORNIA 95301

August 18, 2006

Ms. Pamela C. Creedon  
Executive Officer  
California Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Drive, #200  
Rancho Cordova CA 95670

Project No.: 715\04-05-01

SUBJECT: Tentative Waste Discharge Requirements—City of Atwater Wastewater Treatment Facility, NPDES No. CA 0079197

Dear Ms. Creedon:

The purpose of this letter is to provide comments from the City of Atwater (City) regarding the National Pollutant Discharge Elimination System (NPDES) permit documents circulated on July 12, 2006 by the Central Valley Regional Water Quality Control Board (RWQCB) for the City's Wastewater Treatment Facility (WWTF). The revised order included Tentative Waste Discharge Requirements (TWDRs) for renewal of the NPDES permit authorizing surface water discharge from the WWTF. Also included in this circulation was a Time Schedule Order (TSO) that provides a schedule to comply with the new ammonia effluent limitations included in the TWDRs. Comments are being provided for both of these documents. West Yost Associates, Inc., consulting engineers to the City, participated in the preparation of this letter.

On April 13, 2005, the RWQCB circulated a first draft of the TWDRs. The City and our consultants reviewed this document and provided comments to the RWQCB on June 1, 2005. The RWQCB provided responses to these comments on July 12, 2006 with the revised TWDRs and TSO. The City appreciates the RWQCB's consideration of the City's previous comments. However, the revised TWDRs and TSO include new information and several new requirements that the City believes require additional comment.<sup>1</sup> The organization of these comments is as follows:

- I. General Comments Applicable to Multiple Provisions of the Tentative Waste Discharge Requirements
- II. Comments Applicable to Specific Tentative Waste Discharge Requirements Provisions and Findings

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<sup>1</sup> These comments focus on those issues raised by review of the revisions to the tentative permit since the prior draft. The City does not reiterate all the points included in its prior written submissions to the Regional Board regarding the proposed permit. The previous comments submitted by the City are included in the permit record and incorporated by reference here.

- III. Comments on Monitoring and Reporting Program
- IV. Comments on the Fact Sheet
- V. Comments Applicable to Specific Time Schedule Order Findings

As discussed under item I.A below, the RWQCB has the authority to provide compliance schedules in the WDRs. Therefore, the compliance schedules proposed for coverage under the TSO should be placed in the body of the WDRs, which would render the TSO unnecessary. The City respectfully requests that this revision and the other revisions recommended below be incorporated into the TWDRs prior to adoption. It is the City's position that revisions to address the comments are not sufficiently significant to require re-noticing and recirculation of the TWDRs for comment.

I.

GENERAL COMMENTS APPLICABLE TO MULTIPLE PROVISIONS OF THE  
TENTATIVE WASTE DISCHARGE REQUIREMENTS

**A. INTERIM LIMITATIONS AND COMPLIANCE SCHEDULE FOR AMMONIA  
AND ELECTRICAL CONDUCTIVITY SHOULD BE INCLUDED IN THE  
ORDER**

The final effluent limitations ammonia<sup>2</sup> and electrical conductivity are new requirements and therefore compliance schedules and interim limitations should be included in the Waste Discharge Requirements (WDRs), not a separate Time Schedule Order (TSO). Therefore, if the TSO is no longer necessary. Without compliance schedules and interim limits in the WDRs, the City may immediately be out of compliance through no fault of its own with the final limits in the WDRs, thereby allowing a citizen suit to proceed against the City for failure to comply with the NPDES permit limits.

Inclusion in the WDRs is authorized because the RWQCB is making a new interpretation of a previously adopted objective and such an interpretation would allow for the implementation of the 10-year compliance schedule notwithstanding the fact that the underlying objective was adopted prior to September 25, 1995.

The State Water Board and Regional Water Board for the San Francisco Region in a court case successfully argued that a Regional Water Board's reinterpretation of a narrative objective "represents a newly adopted standard" for which a compliance schedule could attach<sup>3</sup>. The Court of Appeals held that the trial court properly upheld the State Board's conclusion that the San

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<sup>2</sup> The City notes that the RWQCB acknowledges in the Fact Sheet that the effluent data demonstrates that there were no exceedences of the 1999 Ammonia Update 1-hour maximum acute criteria for ammonia. Therefore, no reasonable potential has been established. However, a 1-hour maximum effluent limitation was prescribed for the discharge. This procedure does not conform to 40 CFR 122.44(d)(1)(iii).

<sup>3</sup> See Water Boards' Opposition to Petition for Writ of Mandate in Communities for a Better Environment, et al. v. State Water Resources Control Board, et al., San Francisco Superior Court Case No. 319575, at 15.

Francisco Bay Basin Plan, the language of which is similar to that of the Tulare Lake Basin Plan, authorizes the schedule of compliance to be included within the amended NPDES permit. (*Communities for a Better Environment v. State Water Resources Control Board*, 34 Cal.Rptr.3d 396, 410 (2005)).

## **B. DERIVATION OF FINAL EFFLUENT LIMITATIONS FOR COPPER, LEAD AND ZINC**

The RWQCB relied on the minimum measured upstream receiving water hardness value of 22 mg/L to determine the water quality objectives for copper, lead and zinc that would be applicable to the City's discharge. It is the City's position that the use of the upstream receiving water hardness value is overprotective for the following reasons:

- The Atwater Drain is an effluent dominated waterway that was constructed for the primary purpose of runoff conveyance from urban areas within the City of Atwater and agricultural areas downstream from the City. This conveyance begins approximately 300 feet upstream from the WWTF discharge.
- The upstream receiving water hardness concentrations are highly variable and are not necessarily representative of the downstream receiving water.
- The extent of influence of discharged copper, lead, and zinc on the receiving water is similar to the extent of influence of discharge hardness on the receiving water. Therefore, the receiving water hardness value used to determine the water quality criteria applicable to the WWTP discharge should account for the influence of the discharge hardness on the receiving water.

The Atwater Drain is an effluent dominated waterway that begins approximately 300 feet above the WWTF discharge point. According to Merced Irrigation District Records, the 1918 surveyor report showed that the Atwater Drain was explicitly conceived and designed to collect storm water drainage from the City of Atwater. Above the WWTF discharge, the only known source flows are storm water from the City; and with the exception of storm events, there is no appreciable flow in the Atwater Drain upstream of the City's WWTF discharge.

Downstream of the WWTF discharge point, there are several agricultural discharges to the Atwater Drain. The primary use of all the flows in the Atwater Drain is irrigation on the Joseph Gallo Farms (also known as Gallo Ranch). Any flow remaining in the Atwater Drain after it has left the Gallo Ranch is diverted to the Arena Plains Wildlife Refuge. The primary source of water to the refuge is the City's discharge. To date, there have been no concerns that the City's discharge has had any detrimental effects with respect to these downstream uses.

Hardness measured during a recent agricultural drainage study in California yielded a hardness range of 92 mg/L to 1,243 mg/L (Anderson et al. 2003. *Ecotoxicologic Impacts of Agricultural Drain Water in the Salinas River (Ca, USA)*. Environmental Toxicology and Chemistry. Vol. 22. No. 10. p. 97-106). These values are substantially greater than 22 mg/L, potentially providing further evidence that the minimum measured hardness value is not representative of typical agricultural drainage systems.

Due to the nature of the upstream Atwater Drain flows, the measured upstream receiving water hardness conditions are highly variable. The City has analyzed a total of 49 upstream receiving water samples for hardness between April 2001 and February 2006. A probability plot of these measured hardness values are shown on Figure 1. The maximum hardness concentration measured over this period was 266 mg/L, and the median concentration was 81 mg/L. The minimum 22 mg/L concentration represents the 1<sup>st</sup> percentile of the receiving water hardness data, as shown in the attached Figure 1.

Furthermore, the City has not always measured the receiving water flow at the same time that these receiving water hardness data were collected. Therefore, it is unknown whether the conditions at the time these data were collected were such that the upstream receiving water would have a significant impact on the downstream hardness. However, when the upstream flows were measured at the same time as that some of the lowest upstream receiving water hardness data was collected; the flows were typically a fraction of the discharge flows. A summary of the upstream flows observed when these low receiving water hardness values were measured are provided in Table 1.

**Table 1. Receiving Water Hardness and Rainfall on Selected Days**

Date	Receiving Water Hardness, mg/L	Discharge Flow, mgd	Receiving Water Flow, mgd
10/30/2001	43.4	3.592	0.6
11/3/2003	31	4.009	2.4
2/2/2004 <sup>(a)</sup>	33	4.200	-
2/4/2004 <sup>(a)</sup>	29	3.988	-
2/5/2004 <sup>(a)</sup>	22	4.755	-
5/9/2005	44	4.163	0.05
5/11/2005	44	4.065	-
12/5/2005	32	3.934	0.05
12/7/2005	40	3.719	-
2/6/2006	37	3.518	0.05

<sup>(a)</sup> Receiving water flows measured on February 3<sup>rd</sup> and February 9<sup>th</sup> 2004 were 0.05 mgd.

Therefore, because the receiving water is effluent dominated, the extent that the discharge would contain copper, lead, and zinc in concentrations that would cause adverse instream effects to aquatic toxicity is the same extent that the discharge would be contributing additional hardness to the Atwater Drain. The discharge hardness concentrations range from 53 to 100 mg/L. During most (if not all) conditions, this hardness would have an influence on the toxicity of copper, lead, and zinc in the downstream flows of the Atwater Drain.

The City concludes that the use of a 22 mg/L upstream receiving water hardness is neither appropriate nor representative of the downstream receiving water condition; and that the downstream receiving water hardness is appropriate because it would take into account the influence of the discharge hardness on the receiving water. However, the City recognizes that downstream receiving water hardness data is not currently available.

Additionally, there may be conditions during the winter months when the upstream flows are significant enough to influence the receiving water hardness. However, during these times there would also likely be significant assimilative capacity in the receiving water for the City's discharge. Although, the use of the downstream receiving water hardness would account for the influence from both the upstream flows and the effluent hardness conditions, this value would not account for this assimilative capacity. Therefore, seasonal limitations may be appropriate. The City asserts that additional investigation of these conditions is also warranted.

For these reasons, the City concludes that requests that the TWDRs include a provision that would direct the City to conduct a receiving water hardness assessment to provide sufficient data to identify a representative downstream receiving water hardness that could be used to define the appropriate copper, lead, and zinc water quality criteria for the City's discharge. As discussed further below in item II.A.1-3 and II.D.9, the City also requests that a reconsideration of the final effluent limitations in the TWDRs be allowed based on the results of the proposed hardness study.

### **C. ABILITY TO MEET FINAL MONTHLY AVERAGE EFFLUENT LIMITATIONS FOR EC**

It is the City's position that due to operational changes needed to achieve compliance with the revised chlorine residual effluent limitations included in the TWDRs, it cannot be concluded that the City's effluent can reliably meet the 700  $\mu\text{mhos/cm}$  monthly average final effluent limitation prescribed for EC.

Specifically, increased dosing of the calcium thiosulfate dechlorination agent will be needed to achieve compliance with the revised chlorine residual effluent limitations. This change in practice will result in increased electrical conductivity in the discharge. Based on daily effluent data collected between June 2002 and April 2006, the maximum effluent concentration was 782  $\mu\text{mhos/cm}$  and the average concentration was 549  $\mu\text{mhos/cm}$ . Therefore, with the increased dosing, a significant potential exists for the WWTF to exceed the 700  $\mu\text{mhos/cm}$  monthly average limit for EC.

It is expected that new or modified controls will be necessary to achieve compliance. It is not expected that these controls can be designed installed and put into operation within 30 calendar days. Therefore, the City requests that a compliance schedule be provided for the monthly average effluent limitation for EC. As discussed above in Section IA, this compliance schedule could be included in the TWDRs. An interim limitation equivalent to the maximum effluent concentration of 782  $\mu\text{mhos/cm}$  is also proposed.

Finally, as discussed below in item II.D.9, the City requests that a reopener provision be included in the TWDRs that would allow for a reconsideration of the final EC effluent limitation based on

the results of a site-specific salinity study submitted by the City. The submittal of such a report would be at the sole discretion of the City.

#### **D. REASONABLE POTENTIAL TO CAUSE OR CONTRIBUTE TO CHRONIC TOXICITY IN THE ATWATER DRAIN**

The RWQCB has concluded that the WWTF discharge has the potential to cause or contribute to chronic toxicity in the Atwater Drain. It is the City's assertion that some of the testing results used to develop this conclusion were suspect and may not be representative of actual conditions. Specifically, the following issues have been identified:

- The laboratory control water exhibited similar toxicity to that of effluent and receiving water during several testing events
- There was intermittent toxicity observed in the receiving water, which was used for the toxicity testing dilution series

Because of these issues, it is the City's position that a reasonable potential has not been clearly demonstrated for chronic toxicity. Therefore, the City requests that the requirement for immediately initiating a Toxicity Reduction Evaluation (TRE) be removed from the TWDRs.

The City proposes to develop a TRE workplan and continue conducting quarterly toxicity monitoring in accordance with the requirements established in the TWDRs. As required, the City will conduct accelerated monthly chronic toxicity monitoring if future quarterly monitoring events demonstrate toxicity in the effluent. If effluent toxicity is demonstrated through this accelerated monitoring, the City would conduct a TRE in accordance with the workplan.

#### **E. CHLORINE RESIDUAL MONITORING**

The following information was presented in the comment document submitted on June 1, 2005 with respect to the previously issued TWDRs.:

"The City currently has an ATI online chlorine analyzer for total chlorine monitoring. The accuracy of this instrument is 0.01 mg/L. It is unreasonable to rely on this instrument to provide 24-hour per day accurate analysis at its maximum accuracy. Furthermore, the City relies on calcium thiosulfate for disinfection, which does not result in a positive sulfate (or sulfite) residual when complete dechlorination has occurred. Therefore, it is not feasible to verify that dechlorination has occurred (and therefore chlorine residual is non-detect) using a continuous monitoring device."

In response to this comment, the RWQCB has included Provision G.18 in the TWDRs, which allows the City to submit information demonstrating that the existing analyzer cannot reliably meet the detection limit and to propose alternative limitations. However, the City must still demonstrate that the 0.01 mg/L limitation can be met in the interim period.

With regard to this issue the City would first like to clarify our original comment, then request a modification to this provision accordingly. Specifically, the existing ATI online analyzer can meet the detection limit of 0.01 mg/L. However, because the analyzer normally receives wastewater containing no chlorine residual, the analyzer's self-calibrating logic cannot be used. Therefore, the analyzer needs to be calibrated with manually prepared chlorine solution on a regular basis. Since the City has not historically been required to monitor chlorine residual on a continuous basis at such a low detection limits, it has not been a problem to take the analyzer offline and calibrate it with existing equipment.

With the new proposed requirements, the City would need to be able to calibrate the analyzer with manually prepared chlorine solution with a laboratory unit that can achieve a detection limit of 0.01 mg/L. The existing unit owned by the City cannot achieve this detection limit. Therefore, the City will need to purchase the equipment needed to manually calibrate the existing online analyzer to a level of 0.01mg/L.

Furthermore, since calibration will require a period of time where the analyzer is offline, the City would also require a second on-line continuous chlorine analyzer. This second analyzer could also be use to confirm false-positive readings, in accordance with the Draft Proposed Total Residual Chlorine and Chlorine-Produced Oxidants Policy of California currently being considered by the State Water Resources Control Board.

The City would like to note that for many dischargers, the presence of a dechlorination agent residual in the effluent can be used as an appropriate method for compliance determination. Such measurements are made at much higher detection limits and do not require the same calibration accuracy as measuring chlorine residual directly. As discussed above, a positive sulfate (or sulfite) residual would not occur upon complete dechlorination due to the City's use of calcium thiosulfate. Therefore, such methodologies are not available to the City.

For these reasons, the City would like to request that a six-month compliance schedule for meeting the chlorine residual continuous monitoring requirement. This schedule would provide adequate time to evaluate and implement the best available technology for measuring chlorine residual continuously in the City's discharge. In the interim period, the City will continue to provide chlorine residual monitoring with the currently available equipment. With this equipment, the City will be able to demonstrate that the effluent concentrations of chlorine residual are less than 0.5 mg/L. Furthermore, from time to time, the City will need to calibrate this equipment. As such, continuous monitoring is not feasible. Therefore, the City proposes to provide monitoring every 15 minutes during the 6-month interim compliance period.

## II.

### COMMENTS APPLICABLE TO SPECIFIC TENTATIVE WASTE DISCHARGE REQUIREMENTS PROVISIONS AND FINDINGS

## A. FINDINGS

### 1. Finding 40.g/Total Chlorine Residual

As discussed under item I.E above, the City does not currently have the equipment needed to continuously monitoring chlorine in the discharge due to the fact that the City only has one effluent chlorine residual analyzer available and this analyzer must be periodically taken offline for calibration. Therefore, the City requests that this finding be modified as follows:

**Total Residual Chlorine:** The Basin Plan prohibits the discharge of toxic materials in toxic concentrations. The City uses chlorine to disinfect the effluent. Chlorine can cause toxicity to aquatic organisms when discharged to surface waters. The use of chlorine as a disinfectant presents a reasonable potential that it could be discharged in toxic concentrations. The USEPA recommends, in its *Ambient Water Quality Criteria for the Protection of Fresh Water Aquatic Life*, a maximum chlorine concentration (1-hour average) of 0.019 mg/L and a continuous chlorine concentration (4-day average) of 0.011 mg/L for protection of aquatic life. Using the methodology in the USEPA's *Technical Support Document for Water Quality Based Toxics Control (1991)* (TSD), the average monthly effluent limitation (AMEL) is 0.01 mg/L and the maximum daily effluent limitation (MDEL) is 0.02 mg/L for chlorine. Monitoring for this constituent occurs on a continuous basis, except for periodic occasions when the existing effluent analyzer must be taken offline for calibration.

### 2. Finding 43.a/Copper

As discussed under item I.B above, it is the City's position that the use of the worst-case receiving water hardness value of 22 mg/L to determine CCC and CMC standards for copper is overprotective and unrepresentative of the typical downstream receiving water condition. Therefore, the City requests that this finding be modified as follows:

**Copper (Cu).** The CTR Criterion Continuous Concentration (CCC) copper standard at 22 mg/L hardness (worst-case receiving water hardness) is 2.6 µg/L and the Criterion Maximum Concentration (CMC) is 3.4 µg/L for aquatic life protection. The City submitted results showing the effluent and receiving water above the discharge contained copper concentrations as high as 6.7 µg/L and 27 µg/L, respectively, thereby exceeding the CTR standards. According to calculations based upon the procedures set forth in section 1.4 of the SIP, the AMEL is 1.9 µg/L and the MDEL is 3.4 µg/L. Sampling data indicate that the City is unable to comply with these limitations. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a discharger to achieve immediate compliance with a CTR criterion. Provision G.10 of this Order requires the City to propose a time schedule (including a justification for a time schedule) for compliance with the AMEL and MDEL. Full compliance with the effluent limitations will take effect in the shortest time possible, but in no case later than

18 May 2010. In the interim period, a maximum daily effluent limitation based on the WWTF past performance is established in this Order.

The CCC and CMC standards for copper applied to the discharge are based on the minimum observed upstream receiving water hardness concentration of 22 mg/L. Due to the effluent dominated nature of the receiving water, this hardness value may not be representative of the downstream receiving water conditions. Provision G.xx of this Order requires that a receiving water hardness assessment study be completed by the Discharger to define the receiving water hardness concentration that would be representative. Following the completion of this study, this Order may be reopened to revise the CCC and CMC for copper. The reasonable potential analysis would be adjusted accordingly, and the final effluent limitation modified, as appropriate.

3. Finding 43.b/Lead

As discussed above, it is the City's position that the use of the worst-case receiving water hardness value of 22 mg/L to determine CCC and CMC standards for lead is overprotective and unrepresentative of the typical downstream receiving water condition. Therefore, the City requests that this finding be modified as follows:

**Lead (Pb).** The CTR CCC lead standard at 22 µg/L hardness (worst-case receiving water hardness) is 0.46 µg/L and the CMC is 12 µg/L for aquatic life protection. The City submitted results showing the effluent and the receiving water upstream of the discharge contained lead concentrations as high as 0.81 µg/L and 12.3 µg/L, respectively, thereby exceeding the CTR standards. According to calculations based upon the procedures set forth in section 1.4 of the SIP, the AMEL is 0.38 µg/L and the MDEL is 0.75 µg/L. Sampling data indicate that the City is unable to comply with these limitations. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a discharger to achieve immediate compliance with a CTR criterion. Provision G.10 of this Order requires the City to propose a time schedule (including a justification for a time schedule) for compliance with the AMEL and MDEL. Full compliance with the effluent limitations will take effect in the shortest time possible, but in no case later than 18 May 2010. In the interim period, a maximum daily effluent limitation based on the WWTF past performance is established in this Order.

The CCC and CMC standards for lead applied to the discharge are based on the minimum observed upstream receiving water hardness concentration of 22 mg/L. Due to the effluent dominated nature of the receiving water, this hardness value may not be representative of the downstream receiving water conditions. Provision G.xx of this Order requires that a receiving water hardness assessment study be completed by the Discharger to define the receiving water hardness concentration that would be representative. Following the completion of this study, this Order may be reopened to revise the CCC and CMC for lead. The

reasonable potential analysis would be adjusted accordingly, and the final effluent limitation modified, as appropriate.

4. Finding 43.b/Zinc

As discussed above, it is the City's position that the use of the worst-case receiving water hardness value of 22 mg/L to determine CCC and CMC standards for zinc is overprotective and unrepresentative of the typical downstream receiving water condition. Therefore, the City requests that this finding be modified as follows:

**Zinc (Zn).** The CTR CCC and CMC zinc standards at 22 mg/L hardness (worst-case receiving water hardness) are 33 µg/L for aquatic life protection. The City submitted results showing the effluent and the receiving water upstream of the discharge contained zinc concentrations as high as 39.7 µg/L and 185 µg/L, respectively, thereby exceeding the CTR standards. According to calculations based upon the procedures set forth in section 1.4 of the SIP, the AMEL is 16 µg/L and the MDEL is 33 µg/L. Sampling data indicate that the City is unable to comply with these limitations. Section 2.1 of the SIP allows for compliance schedules within the permit for existing discharges where it is demonstrated that it is infeasible for a discharger to achieve immediate compliance with a CTR criterion. Provision G.10 of this Order requires the City to propose a time schedule (including a justification for a time schedule) for compliance with the AMEL and MDEL. Full compliance with the effluent limitations will take effect in the shortest time possible, but in no case later than 18 May 2010. In the interim period, a maximum daily effluent limitation based on the WWTF past performance is established in this Order.

The CCC and CMC standards for zinc applied to the discharge are based on the minimum observed upstream receiving water hardness concentration of 22 mg/L. Due to the effluent dominated nature of the receiving water, this hardness value may not be representative of the downstream receiving water conditions. Provision G.xx of this Order requires that a receiving water hardness assessment study be completed by the Discharger to define the receiving water hardness concentration that would be representative. Following the completion of this study, this Order may be reopened to revise the CCC and CMC for zinc. The reasonable potential analysis would be adjusted accordingly, and the final effluent limitation modified, as appropriate.

4. Finding 46/Toxicity Reduction Evaluation

As discussed in item I.D, it is the City's position that reasonable potential for the WWTF discharge to cause chronic toxicity in the receiving water has not been demonstrated due to several questionable toxicity sampling results. Therefore, the City requests that this finding be deleted from the TWDRs.

## **B. EFFLUENT LIMITATIONS**

### **1. Limit B.4/Chlorine Residual**

As discussed in more detail under item I.E above, the City requests a six-month compliance schedule for meeting the total chlorine residual monitoring requirement. This schedule is needed to provide the City the time needed to do the following:

- Purchase the laboratory equipment needed to reliably calibrate the existing chlorine monitoring device at the detection limits required to meet the new limitation, and
- Purchase and install a second continuous monitoring device that can be used to verify a potential false-positive reading.

Therefore, the City requests that the following footnote be added to both the monthly average and daily maximum chlorine residual effluent limitations:

Prior to 22 May 2007, compliance with these limitations can be demonstrated using a single chlorine residual analyzer with a minimum detection limit of 0.05 mg/L.

Furthermore, as mentioned under item I.E above, the Draft Proposed Total Residual Chlorine and Chlorine-Produced Oxidants Policy of California states:

“If a discharger conducts continuous monitoring and the discharger can demonstrate, through data collected from the discharger’s back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine then any excursion resulting from the recorded spike will not be considered an actual exceedance, but rather reported as a false-positive...”

Therefore, the City also requests that the following footnote also be applied to both the monthly average and daily maximum chlorine residual effluent limitations:

If an apparent exceedance of the chlorine residual limit occurs, and if a back-up monitoring system is in service at the time of the apparent exceedance, then any reported exceedance not corroborated by the back-up system will not be considered as an exceedance, but rather reported as a false positive.

### **2. Limit B.5/CTR Effluent Limitations**

As discussed above, it is the City’s position that the use of the worst-case receiving water hardness value of 22 mg/L to develop CCC and CMC standards for copper, lead, and zinc is overprotective and unrepresentative of the typical downstream receiving water condition. Therefore, the City requests that the following footnote be added to the Final CTR Effluent Limitations and the Interim CTR Effluent Limitations for copper, lead, and zinc:

The CCC and CMC standards for copper, lead, and zinc applied to the discharge are based on the minimum observed upstream receiving water hardness concentration of 22 mg/L. Due to the effluent dominated nature of the receiving water, this hardness value may not be representative of the downstream receiving water conditions. Provision G.xx of this Order requires that a receiving water hardness assessment study be completed by the Discharger to define the receiving water hardness concentration that would be representative. Following the completion of this study, this Order may be reopened to revise the CCC and CMC for copper, lead, and zinc. The reasonable potential analysis would be adjusted accordingly, and the final effluent limitation modified, as appropriate.

## C. RECEIVING WATER LIMITATIONS

### 1. Limit D.1/Dissolved Oxygen

The proposed language is difficult to interpret. The City will monitor the Atwater Drain once per week for temperature and DO. It is not clear from this limitation how the City should calculate the monthly median of the mean daily dissolved oxygen or the saturation in the main water mass. In the winter, when the Atwater Drain is cold, the water may have a very high saturation number. The City's effluent will be warmer and, therefore, may be unable to hold enough oxygen to meet the 85 percent requirement. These items need to be clarified.

Therefore, the City requests that the TWDRs be clarified as to how and when this receiving water limitation applies, how each of these measurements are to be determined, and which background values are to be used for comparison.

Alternately, the City requests that the wording of this limitation be modified as follows:

The discharge shall not cause or contribute to the following in the Atwater Drain:

Concentrations of dissolved oxygen to fall below 5.0 mg/L. ~~The monthly median of the mean daily dissolved oxygen concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent saturation.~~

### 2. Limit D.14/Fecal Coliform

The Monitoring and Reporting Program specifies that fecal coliform receiving water monitoring is required on a weekly basis in the receiving water. However, this receiving water limitation requires a minimum of five samples for averaging purposes. For most months throughout the year, it is likely that weekly sampling will only result in four monitoring events within a given 30-day period. Therefore, the City requests that either this receiving water limiting be removed from the TWDRs or the text included for this limitation be modified as follow:

"The fecal coliform concentration based on a minimum of not less than ~~four~~five samples for any 30-day period shall not exceed a geometric mean of 200 MPN/100 mL."

#### **D. PROVISIONS**

##### **1. Receiving Water Hardness Assessment Study**

As described above in Section I.B, the City asserts that the use of the worst-case receiving water hardness value of 22 mg/L to develop CCC and CMC standards for copper, lead and zinc is overprotective and unrepresentative of the typical downstream receiving water condition. Therefore, the City requests that the following provision be added to the TWDRs:

The City shall conduct a receiving water hardness assessment study in accordance with the following schedule

<u>Task</u>	<u>Compliance Date</u>
a. <u>Submit a receiving water hardness study workplan and proposed time schedule for Regional Water Board review and comment. The workplan shall detail the steps and information necessary to determine representative downstream receiving water hardness conditions that could be used to define the appropriate water quality criteria for copper, lead, and zinc that are protective of downstream beneficial uses. This workplan should also include a discussion of how the proposed methodology would be in conformance with the EPA guidelines for defining the applicable water quality criteria for these constituents.</u>	<u>22 March 2007</u>
b. <u>Implement the EO approved work plan.</u>	<u>30 days following EO written approval of a.</u>
c. <u>Submit proposed receiving water hardness concentration to be used for defining copper, lead, and zinc water quality criteria for Regional Water Board EO approval</u>	<u>By the deadline approved by the EO but no later than 22 March 2009</u>

Pending EO approval of the proposed receiving water hardness value, this Order will be reopened to revise the CCC and CMC for copper, lead, and zinc. The reasonable potential analysis would be adjusted accordingly, and the final effluent limitation modified, as appropriate.

##### **2. Provision G.6/ Use Site Control Plan**

The City requests that the Use Site Control Plan provision be reworded as follows for clarity:

**By 22 March 2007**, the City shall submit a Use Site Control Plan that identifies ~~the hazards of discharge to the Atwater Drain and~~ what actions the City will provide to notify the public that the water in the Atwater Drain is wastewater treatment plant effluent and that it does not meet the California Department of Health Services criteria for full water contact recreation. The Use Site Control Plan shall contain a map depicting the locations of all signs posted in accordance with Provision G.7. Each sign depicted on the map shall be assigned a unique number to facilitate monitoring for compliance with this discharge specification.

3. Provision G.8/Accelerated Toxicity Monitoring

As discussed in item I.D above, the City asserts that due on several laboratory issues, reasonable potential cannot be clearly established for aquatic toxicity. Therefore, the City requests that the first paragraph of this provision be modified as follows:

Should WWTF effluent exhibit toxicity ~~subsequent to implementation of Provision G.12~~, the City shall comply with the procedures below (a. through c.). These procedures establish a toxicity numeric monitoring trigger for accelerated chronic toxicity monitoring and TRE initiation.

Furthermore, Provision G.12 requires that the City submit a TRE Work Plan by 22 March 2007. Therefore, it is the City's assertion that a second Work Plan would not be needed if the test results exceed the monitoring trigger during the accelerated monitoring. Therefore, it is requested that protocol c.(3) be modified as follows:

- d If the result of any accelerated monitoring toxicity test exceeds the monitoring trigger, the City shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity in accordance with the City's approved TRE Work Plan, as required under Provision G.12. ~~Within sixty (60) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the City shall submit a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan shall be developed in accordance with EPA guidance<sup>4</sup>, contain a schedule for implementing the TRE, and be of adequate detail to allow the City to immediately initiate a TRE upon Executive Officer approval.~~

4. Provision G.12/TRE Workplan

As discussed in item I.D above, the City asserts that based on several laboratory issues, reasonable potential cannot be clearly established for aquatic toxicity and the immediate

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<sup>4</sup> See the Fact Sheet for a list of EPA guidance documents that must be considered in development of the TRE Work Plan.

implementation of a TRE is not appropriate at this time. A TRE will be implemented if 1) continued quarterly monitoring shows demonstrated toxicity; and 2) toxicity is detected in any accelerated monitoring events as provided under Provision G.8. Furthermore, the City requests that this provision be modified as follows:

By 22 March 2007, the City shall submit to the Regional Water Board a TRE Work Plan for Executive Officer approval. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan shall be developed in accordance with EPA guidance<sup>1</sup>, contain a schedule for implementing the TRE, and be of adequate detail to allow the City to immediately initiate a TRE ~~upon Executive Officer approval~~ as required in Provision G.8.

5. Provision G.13/Temperature/Turbidity Study

This provision requires that a Temperature/Turbidity Study Work Plan be submitted by December 22, 2006 for RWQCB and Department of Fish and Game review and comment. The City requests that this compliance deadline be postponed to 22 March 2007 to allow for adequate time to develop the Work Plan.

6. Provision G.15/Groundwater Monitoring Tasks

This provision provides a compliance schedule for completion of the tasks needed to define the background groundwater quality in the vicinity of the WWTF. This schedule requires that a background quality technical report be submitted within 365 days of the submittal of a monitoring well installation report of results (Provision G.15.d).

There are several places throughout the TWDRs that state that the background characterization will be provided within one year of groundwater monitoring. However, at least two or three initial wells will need to be installed and monitored before a suitable background monitoring location(s) can be identified. Once this background well is installed, the City would submit the well installation report of results, and within 365 days of the submittal of this report the background quality technical report will be submitted. Therefore, groundwater monitoring is likely to occur for a period greater than one year before the background quality technical report can be submitted.

The City specifically requests that this provision be modified as follows:

The City shall submit a technical report describing a proposed groundwater monitoring well network. The technical report shall consist of a monitoring well installation work plan that satisfies Attachment E, Standard Monitoring Well Provisions for Waste Discharge Requirements. The network shall include one or more background monitoring wells and sufficient number of designated monitoring wells to evaluate the extent to which, if any, WWTF units, including but not limited to, the unlined sludge beds, have degraded or threaten to degrade groundwater. These include monitoring wells immediately down gradient of the unlined sludge drying beds. All wells shall comply with appropriate standards as

described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 94-81 (December 1981), and any more stringent standards adopted by the City or County pursuant to CWC section 13801. The City shall install approved monitoring wells and commence groundwater monitoring in accord with this Order's Monitoring and Reporting Program (MRP). After the first sampling event, the City shall report on its sampling protocol as specified in this Order's MRP. After completion of Task d outlined below~~one year of monitoring~~, the City shall characterize background quality of monitored constituents in a technical report. The City shall comply with the following compliance schedule in implementing the work required by this Provision:

7. Provision G.17/Sludge Drying Beds

Provision G. 17 requires an allowance of 90 days to demonstrate whether groundwater degradation (if occurring) could be attributed to offsite sources. However, a determination of groundwater degradation will need to be based on the conclusions presented in the Background Quality Technical Report. Therefore, the City requests that this provision be clarified as follows:

Compliance with this Order's Groundwater Limitations will be evaluated based on data collected from approved groundwater monitoring wells following completion of Provision G.15, Task f. If, following the completion of Provision G.15, Task f. groundwater passing under the sludge drying beds is found to be ~~or~~ degraded the City shall conclude that its practice of discharging digester sludge to unlined sludge drying beds caused the pollution or degradation unless it can demonstrate within **90 days** that the pollution or degradation was due to an offsite source. Within **90 days** of receiving written notification from the Executive Officer that the City's use of unlined sludge drying beds has caused pollution or degradation, the City shall submit a technical report containing a work plan and implementation schedule describing proposed modifications to the WWTF's sludge handling operations to ensure compliance with this Order's Sludge Specifications and Groundwater Limitations. The technical report submitted pursuant to this Provision is subject to the requirements of Provision G.4 and is subject to Executive Officer approval.

8. Provision G.18/Chlorine Residual Monitoring

As discussed under I.E above, the City has requests that a six-month compliance schedule to evaluate and implement the best available technology for measuring chlorine residual continuously in the City's discharge. Therefore, the City requests that this provision be modified as follows:

~~If the City believes its online chlorine analyzer cannot reliably meet a detection of 0.01 mg/L, the City shall submit a technical report that includes specific data and information demonstrated such. The technical report shall also propose a detection limit along with technical justification for the proposed limit. The technical report is subject to Executive Officer approval. This Order requires that chlorine~~

residual be monitored on a continuous basis at a concentration of 0.01 mg/L. The Discharger does not currently have the equipment needed to provide continuous measurements of chlorine residual at this concentration. The Discharger is required to establish a system for collecting these measurements no later than 22 May 2007. In the interim, monitoring will be provided every 15 minutes using a single chlorine residual analyzer recording device with a minimum method detection limit of 0.05 mg/L.

9. Request for Additional Reopener Provisions

The City requests that the following reopener provisions be added to the TWDRs:

- (a) If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this Order may be reopened and modified in accordance with the new or amended standards.
- (b) If new information is provided, that was not available at the time of permit issuance and that would have justified different permit conditions at the time of issuance, this Order may be reopened and modified in accordance with the new or amended standards.
- (c) Dilution has not been granted in this Order, thus end-of-pipe effluent limitations are required for most constituents where reasonable potential is demonstrated. Should a real-time flow monitoring station be installed in the vicinity of the discharge, and if real-time flow monitoring data from the station and supporting mathematical modeling analysis demonstrates that sufficient dilution flows are available in the Atwater Drain, this Order may be reopened to allow dilution credits based on the real-time flow monitoring data.
- (d) A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper, lead, and zinc. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.
- (e) If the Discharger submits a report detailing the results of a site-specific investigation of appropriate EC levels to protect the beneficial use of agricultural supply in areas irrigated with Atwater Drain waters in the vicinity of the discharge. The Regional Water Board will evaluate the recommendations, select appropriate values, and reopen the Order, as necessary, to include appropriate effluent limitations for EC.

- (f) This Order requires a temperature/turbidity study be submitted to the Regional Water Board for EO approval and to the Department of Fish and Game for review and comment. Upon submittal of a report detailing the results of a site-specific investigation of receiving water temperature/turbidity, the Regional Water Board will evaluate the recommendations, select appropriate values, and reopen the Order, as necessary, to develop temperature and turbidity effluent limitations.
- (g) This Order requires a receiving water hardness assessment study be submitted to the Regional Water Board for EO approval. Upon submittal of a report detailing the results of a site-specific investigation of receiving water hardness, the Regional Water Board will evaluate the recommendations, select appropriate values, and reopen the Order, as necessary, to develop revised copper, lead, and zinc effluent limitations.

### III.

#### COMMENTS ON MONITORING AND REPORTING PROGRAM

##### **A. EFFLUENT MONITORING**

###### **1. Acute Toxicity Monitoring**

The City requests that the monitoring requirements for acute toxicity be removed from the Effluent Monitoring table and instead be provided under a separate Whole Effluent Testing Requirement Section as detailed under item III.C.2, below.

###### **2. Dioxin Monitoring**

Historically, dioxin has been intermittently present in the discharge at detectable levels. There is a substantial cost of monitoring dioxin on a monthly basis. Therefore, the City requests in lieu of monthly monitoring, that 2,3,7,8-TCDD (dioxin) monitoring be required on a quarterly basis with an accelerated monthly monitoring required if the dioxin levels exceed the prescribed final effluent limitations during a quarterly monitoring event.

Specifically, if dioxin is detected at levels exceeding the final effluent limitations during any quarterly monitoring event, monthly monitoring would occur until testing indicates discharge concentrations are less than the prescribed final effluent limitations. Quarterly monitoring would resume if dioxin was not detected above the effluent limitation.

Therefore, the City requests that the monitoring for dioxin be changed from monthly to quarterly and that footnote 10 of the Effluent Monitoring table be amended as follows:

Samples shall be analyzed for 2,3,7,8-TCDD and the other 16 congeners listed in Section 3 of the SIP. See the MRP section entitled Reporting for information on how to report the analytical results. If the final effluent limitations provided in the Order are exceeded based on the results of quarterly dioxin monitoring event, the

City will conduct accelerated monthly dioxin monitoring until testing shows that dioxin levels have been reduced to less than the prescribed final effluent limitations. Quarterly monitoring would resume if dioxin was not detected above the final effluent limitations provided in the Order during any of the monthly accelerated monitoring events.

3. Chlorine Residual Monitoring

As discussed under item I.E above, the City does not currently have the equipment needed to comply with the continuous chlorine residual monitoring requirements included in the TWDRs. Therefore, the City has requested that Provision G.18 be modified to provide a six-month compliance schedule to allow the time needed to purchase and install this equipment.

As such, the City request that Footnote 1 of the Effluent Monitoring table be modified as follows:

Total chlorine residual samples shall be collected at the points labeled E-1 and E-2 on Attachment B. Monitoring at E-1 shall commence on the final compliance date established in Provision G.11, Task c. Monitoring at E-2 shall be every 15 minutes prior to 22 May 2007.

Furthermore, the City request that Footnote 2 of the Effluent Monitoring table be modified as follows:

The detection limit of the meter at E-2 shall be  $\leq 0.05$  mg/L prior to 22 May 2007.  
The detection limit of the meter at E-2 shall be  $\leq 0.01$  mg/L ~~or the detection limit approved by the Executive Officer~~ after 22 May 2007.

4. Priority Pollutant Monitoring

The City request that Footnote 2 of the Effluent Monitoring table be modified as follows:

Priority Pollutants consist of the constituents listed in the most recent National Toxics Rule and California Toxics Rule. The laboratory shall investigate and report all unknown peaks with concentrations approaching internal standards utilizing tentative identified compound (TIC) protocol. The reported minimum levels shall comply with the SIP. Priority pollutant testing shall exclude Bromodichloro-methane, Chlorodibromo-methane, Copper, Lead, Zinc, Cadmium, Mercury, Nickel, Selenium, and 2,3,7,8-TCDD (Dioxin), which are covered by separate monitoring requirements.

**B. RECEIVING WATER MONITORING**

1. Instantaneous Flow Monitoring

As part of the receiving water monitoring, the City is required to determine instantaneous flow in the receiving water. The City currently does not have a flow meter installed at any location in the receiving water. Discussions with RWQCB staff indicate that the City's existing method of

instantaneous flow determination is adequate. Therefore, the City requests that the following footnote be added to the Receiving Water Monitoring table to document that the City's existing method of metering upstream flows is acceptable:

The City's current method of estimating instantaneous receiving water flow is acceptable for meeting this monitoring requirement. This method involves quantifying flow through a culvert upstream of the Atwater WWTP discharge point. Flow is calculated through the culvert as follows. City staff measures the time required for a marker to travel (float) along the length of the culvert. Dividing the length by the travel time yields a velocity. The cross-sectional area of the culvert is determined by measuring the depth of water in the culvert and incorporating the culvert geometry. Flow is calculated by multiplying the culvert cross-sectional area and the calculated velocity.

2. Chlorine Residual Monitoring

As discussed under item II.D.8 above, the City does not currently have the equipment needed to calibrate the existing continuous chlorine residual equipment to a level of 0.01 mg/L. Such equipment would also be used to complete the required receiving water chlorine residual monitoring. Therefore, the City request that Footnote 3 of the Receiving Surface Water Monitoring table be modified as follows:

Minimum detection limit shall be no greater than 0.05 mg/L prior to 22 May 2007.  
Minimum detection limit shall be no greater than 0.01 mg/L after 22 May 2007.

3. Priority Pollutants Monitoring

The City requests that the same frequency of monitoring be applied to both the effluent and receiving water monitoring for priority pollutants. Effluent priority pollutant monitoring is currently required on an annual basis, while receiving water priority pollutant monitoring is on a quarterly basis for one year with subsequent annual monitoring thereafter. Therefore, the City requests that receiving water monitoring also be required annually and that Footnote 5 be removed from the Receiving Surface Water Monitoring table.

**C. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

1. Ammonia Toxicity Adjustments

The City can not reliably achieve the 30-day average final effluent limitation prescribed for ammonia. Therefore, the RWQCB has provided a time schedule for compliance with the monthly average limitation in the TSO. (Note that the City has requested that the time schedule for compliance be provided in the TWDRs.) Therefore, the City asserts that it would be appropriate to allow for adjustments to eliminate ammonia-related toxicity during the chronic toxicity testing until the compliance deadline for ammonia is met. Specifically, the City requests that the following item be included in testing requirements for the three-species chronic toxicity testing:

Ammonia Toxicity – The toxicity testing may be modified to eliminate ammonia-related toxicity until the end of the compliance schedule for ammonia, but no later than 5 years from adoption of this Order, at which time the Discharger shall be required to implement the test without modifications to eliminate ammonia toxicity.

2. Acute Toxicity Testing

For purposes of clarification, the City requests that the acute toxicity testing requirements be added to this section and removed from the Effluent Limitations table. Under such circumstances the section title "Three Species Chronic Toxicity Monitoring" would be revised to "Whole Effluent Toxicity Testing Requirements." The specific requirements for acute toxicity testing would be as follows:

Acute Toxicity Testing. The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – the Discharger shall perform quarterly acute toxicity testing, concurrent with effluent ammonia sampling.

2. Sample Types – For Static Non-Renewal and Static Renewal testing, the samples shall be 24-hour flow proportional composites and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location E-2.

3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*) or rainbow trout (*Oncorhynchus mykiss*).

4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. Until the end of the compliance schedule specified in the TSO that accompanies this order, but no later than 5 years from adoption of the TSO, pH adjustments may only be allowed to reduce ammonia related toxicity, after which no pH adjustments will be allowed unless approved by the Executive Officer.

5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

**D. GROUNDWATER MONITORING**

1. Monitoring Well Purging

The City requests that groundwater monitoring specifications be expanded to allow for the use of micro-purge techniques in addition to standard well purging of 3 to 5 pore volumes. Specifically, the City requests the following modifications to the TDWRs text:

Prior to collecting samples, the monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. ~~Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging is typically from 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume.~~ Method used for purging shall meet applicable EPA standards and be outlined in the Monitoring Well Installation Workplan.

2. Reporting Requirements

For clarity the City requests that the second paragraph of the Groundwater Monitoring Requirements on Page 9 of the Monitoring and Reporting Program be modified to conform with Provision G.15 and G.17 as follows:

~~After one full year after the completion of Provision G.15, Task d groundwater monitoring,~~ the City shall analyze monitoring data from background well(s) to compute background water quality values for each constituent and to perform an initial assessment of whether there is evidence of an impact from the discharge. To complete this task, the City shall use monitoring data from background, internal and boundary monitoring wells in an appropriate data analysis method (e.g., Title 27 section 20415(e)(7-9)). Prior to the completion of Provision G.15, Task d, reports shall be submitted in accordance with the EO approved groundwater monitoring well implementation schedule. Reports thereafter shall be submitted quarterly by the 1<sup>st</sup> day of the second month after the prescribed sample collection and shall include the same analysis. Location shall be based upon and expressed as both latitude and longitude (NAD 1983) and California Coordinate System as surveyed.

3. Increase in Pollutants in Boundary or Internal Monitoring Wells Over Background Levels

For clarity, the City requests that the third paragraph of the Groundwater Monitoring Requirements on Page 9 of the Monitoring and Reporting Program be modified to conform with Provisions G.15 and G.17 as follows:

Compliance with this Order's Groundwater Limitations will be evaluated based on data collected from approved groundwater monitoring wells following completion of Provision G.15, Task f. If the City, during any quarterly data evaluation following the completion of Provision G.15, Task f, finds statistically significant evidence of an increase in waste constituents in groundwater at a boundary and/or internal monitoring well compared to background levels, the City shall conclude that the discharge caused the increase unless it can demonstrate within 90 days that it was due to an offsite source. The City shall

describe the data analysis method used as well as the criteria it used for determining "statistically significant evidence."

#### **E. REPORTING**

##### **1. Annual Report Requirement 7/Crops Grown in the Area of the Receiving Water**

It is unnecessarily burdensome for the City to obtain the information needed to conform to this requirement because the TWDRs includes final effluent limitations necessary to protect crops that may be irrigated with the City's effluent, regardless of what types of crops are grown. Furthermore, the City has been required to submit a Use Site Control Plan. Therefore, it is the City's position that an annual summary of crops grown in the area receiving water from the Atwater Drain is not warranted, and the City requests that this requirement be removed from TWDRs.

#### **IV.**

#### **COMMENTS ON THE FACT SHEET**

#### **A. RATIONALE FOR NON-PRIORITY POLLUTANT EFFLUENT LIMITATIONS**

As discussed under item I.E above, the City does not currently have the equipment needed to continuously monitoring chlorine in the discharge at a concentration of 0.01 mg/L due to the fact that the City only has one effluent chlorine residual analyzer available and this analyzer must be periodically taken offline for calibration. However, the City's existing calibration equipment only allows for reliable calibration at a level of 0.05 mg/L. Therefore, the City requests that the second paragraph on page 11 of the fact sheet be modified as follows:

The limits in this Order are based upon EPA's Water Quality Criteria of 0.019 mg/L as a daily maximum concentration and 0.011 mg/L as a 30-day average concentration. The final effluent limitation for chlorine was calculated using the procedures set forth in section 5.4 of the USEPA *Technical Support Document for Water Quality-based Toxics Control* (1991). The effluent daily maximum limitation is 0.02 mg/L and the effluent monthly average limitation is 0.01 mg/L, the calculations for which are below. Except for when the continuous meter is offline for calibration, ~~the City continuously monitors the effluent, the current reliable reporting detection limit of the instrument is less than 0.01~~ 0.05 mg/L and the City has an automatic gate to divert the flow to a pond if there is a violation.

#### **B. RATIONALE FOR TERTIARY TREATMENT REQUIREMENTS**

##### **1. Economic Analysis**

The information included in this analysis does not conform to the most up-to-date information provided in Finding 54.d of the TWDRs. The Fact Sheet contains a less recent economic analysis

(March 2003). Therefore, the City requests that Fact Sheet be updated to be consistent with the cost estimate provided in the TWDRs.

**C. REASONABLE POTENTIAL ANALYSIS AND EFFLUENT LIMITS FOR CTR AND NTR POLLUTANTS**

**1. Hardness**

The City requests that the following text be added to the first paragraph on Page 18 of the Fact Sheet following "...water quality objective".

*As stated in Section 1.2 of the SIP, "When implementing the provisions of this Policy, the RWQCB shall ensure that criteria/objectives are properly adjusted for hardness or pH, using the hardness or pH values for the receiving water..." However, the SIP does not designate where in the receiving water the hardness data should be collected. For an effluent dominated waterway like the Atwater Drain, it would be expected that the discharge hardness would have a significant impact on the downstream aquatic toxicity. To date, the only receiving water hardness data available is from the City's upstream receiving water monitoring location. However, flow data was not collected concurrently with this hardness data. Therefore, the upstream influence on the downstream hardness concentrations cannot be determined. Due to the lack of sufficient data to assess the downstream conditions, Therefore, the hardness in the calculations below based on the lowest reported receiving water concentration of 22 mg/L. Using the lowest receiving water value ensures the effluent limitations are sufficiently protective of the beneficial uses of the Atwater Drain. However, due to the effluent dominated nature of the receiving water, it is suspected that the upstream receiving water hardness of 22 mg/L may not be representative of the downstream receiving water condition. Therefore, the City has been required to conduct a site-specific study to identify a representative receiving water hardness. Following the completion of this study, this Order may be reopened to revise the hardness-dependent metals CCC and CMC. The reasonable potential analysis would be adjusted accordingly, and the final effluent limitation modified, as appropriate.*

**2. Development of Final Effluent Limitations**

The City requests that the following text be added to the first paragraph on Page 20 of the Fact Sheet following "...uses of the Atwater Drain".

*However, the City is conducting a receiving water hardness assessment study, and the results of the study would be used to determine a hardness concentration representative of Atwater Drain. This information could be used to revise effluent limitations for copper, lead and zinc.*

**D. ATTACHMENT A**

1. Hardness Value Used for Deriving Appropriate Criteria for Metals

The information provided on Page 1 of Attachment A indicates that a receiving water hardness of 53 mg/L was used to define the CMC and CCC for some metals. However, the CMC and CCC data presented in the table are based on a hardness value of 22 mg/L. Therefore, the City requests that the data label be changed to conform to the information presented in the Table.

**E. SUMMARY OF CHANGES TO CURRENT ORDER**

The City respectfully requests that the RWQCB review and, as necessary, update all of the findings in the Fact Sheet to ensure they conform to the information included in the TWDRs and any changes made to the TWDRs prior to its adoption.

V.

SPECIFIC COMMENTS APPLICABLE TO THE TIME SCHEDULE ORDER FINDINGS

As described above in Section IA, the RWQCB has the authority to provide compliance schedules in the WDRs. Therefore, the compliance schedules proposed for coverage under the TSO should be placed in the body of the WDRs, which would render the TSO unnecessary. Nevertheless, should RWQCB staff opt to retain the TSO, the City would request that the compliance time schedule provided in the TSO be expanded to include the monthly average effluent limitation for EC. The City proposes to meet the same requirements prescribed in the TSO for providing a Method of Compliance Workplan/Schedule and a Pollution Prevention Plan for EC. Such a schedule would provide the City with time to evaluate the sources and potential causes of elevated EC concentrations in the effluent prior to the application of a final effluent limitation for this parameter. Such time is needed due to assess the potential EC impacts associated with the calcium thiosulfate dosing modifications needed to meet final effluent limitations for chlorine residual.

Thank you for your consideration of these comments.

Sincerely,



Mr. David Church  
Public Works Director

attachment: Figure 1. City of Atwater WWTF Upstream Receiving Water Hardness Concentrations

cc: Mr. Bert E. Van Voris, Supervising WRC Engineer, CVRWQCB, Fresno Branch Office  
Mr. W. Dale Harvey, Senior WRC Engineer, CVRWQCB, Fresno Branch Office  
Mr. Matt Scroggins, WRC Engineer, CVRWQCB, Fresno Branch Office  
Mr. Mo Khatami, Deputy City Manager, City of Atwater

Ms. Pamela C. Creedon

August 18, 2006

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Mr. David Church, Director of Public Works, City of Atwater  
Mr. Monte Hamamoto, Veolia Water North America-West. LLC  
Mr. Bruce West, West Yost Associates  
Ms. Kathryn Gies, West Yost Associates  
Ms. Melanie Carr, West Yost Associates  
Ms. Roberta L. Larson, Somach, Simmons & Dunn  
Ms. Kelley M. Taber, Somach, Simmons & Dunn  
Ms. Andrea L. Shephard, Ph.D, EDAW, Inc.

**Figure 1. City of Atwater WWTF  
Upstream Receiving Water Hardness Concentrations**

